

MEMORANDUM

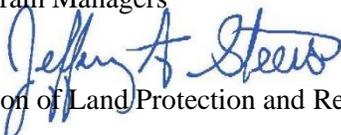
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF LAND PROTECTION AND REVITALIZATION
OFFICE OF SPILL RESPONSE AND REMEDIATION

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SUBJECT: Guidance Memo No. LPR-SRR-2020-02 – **Storage Tank Program Technical Manual, Volume 1: Regulatory and Statutory Framework for Storage Tank Cleanups**

TO: Petroleum Program Managers

FROM: Jeffery Steers 
Director, Division of Land Protection and Revitalization

DATE: September 24, 2020

COPIES: Regional Directors, Deputy Regional Directors, Betty Lamp, Renee Hooper, Karen Haley-Wingate, James Barnett, Chad Quesenberry, Zach Pauley

Summary:

The Storage Tank Program Technical Manual outlines and discusses procedures used by DEQ staff following the release of petroleum into the environment. Volume 1 provides a general regulatory and statutory framework for petroleum cleanups in Virginia. Also, this guidance contains definitions that are utilized throughout the program.

This document replaces Guidance Document LPR-SRR-2016-1 Volume 1: Regulatory and Statutory Framework for Storage Tank Cleanups, Fifth Edition, issued March 23, 2016. New UST Regulations that became effective January 1, 2018, resulted in changes to some of the program definitions and this guidance is being updated to reflect those changes.

Electronic Copy:

Once effective, an electronic copy of this guidance will be available on:

- The Virginia Regulatory Town Hall under the Department of Environmental Quality(<http://www.townhall.virginia.gov/L/gdocs.cfm?agencynumber=440>);
- The Department's website at <http://www.deq.virginia.gov/Programs/LandProtectionRevitalization/Laws,Regulations,Guidance.aspx>

Contact information:

Please contact James Barnett at 804-698-4289 or james.barnett@deq.virginia.gov with any questions regarding the application of this guidance.

Attachment 2

Certification:

As required by Subsection B of § 2.2-4002.1 of the Administrative Process Act (APA,) the agency certifies that this guidance document conforms to the definition of a guidance document in § 2.2-4101 of the Code of Virginia.

Disclaimer:

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any alternative method. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.

STORAGE TANK PROGRAM TECHNICAL MANUAL

VOLUME 1: REGULATORY AND STATUTORY FRAMEWORK FOR STORAGE TANK CLEANUPS

September 2020 Revision

DEQ Guidance Document #LPR-SRR-2020-02

Commonwealth of Virginia
Department of Environmental Quality

Storage Tank Program Technical Manual
Volume 1: Regulatory and Statutory Framework for Storage Tank Cleanups

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INTRODUCTION

The procedures and guidelines contained within the Storage Tank Program Technical Manual are intended to: (1) protect human health and the environment within the Commonwealth through efficient and effective response to storage tank releases; (2) promote statewide consistency in the implementation of release response and corrective action; and (3) reduce time and expenses needed to complete release response and corrective action by determining necessary actions (to the extent possible) and by defining the scope of work prior to initiation of that work. The Department is committed to protecting human health and the environment and serving the citizens of the Commonwealth in a timely and efficient manner.

This document replaces Volume 1: Regulatory and Statutory Framework for Storage Tank Cleanups, Fifth Edition, issued March 23, 2016 due to new UST Regulations effective January 1, 2018 ([LPR-SRR-2018-3 New Underground Storage Tank Requirements Effective January 1, 2018](#)). Earlier revisions and manuals should be used for historical information only.

The primary focus of the Storage Tank Program Technical Manual is to provide guidance on release response and corrective action requirements for Underground and Aboveground Storage Tanks containing petroleum or oil. The procedures also are applicable to regulated Underground Storage Tanks (USTs) containing nonpetroleum regulated substances. Since very few of the regulated USTs registered with DEQ contain regulated substances other than petroleum, the manual does not discuss in great detail the specific requirements for non-petroleum regulated USTs. Unless specifically noted otherwise, the regulated UST procedures in this manual apply to both petroleum and non-petroleum regulated substances. Guidelines contained within the Storage Tank Program Technical Manual were also developed to conform with reimbursement guidance to responsible parties. The Virginia Petroleum Storage Tank Fund Reimbursement Guidance Manuals are available on the Virginia Town Hall website at: [LPR-SRR-2019-01 Volume VI – Virginia Petroleum Storage Tank Reimbursement Guidance Manual, Application Process](#) and [LPR-SRR-2019-02 Virginia Petroleum Storage Tank Fund Reimbursement Guidance Manual, Volume VII - Usual and Customary Rates \[UCRs\]](#).

This manual was developed by Central and Regional Office staff members and is intended as a guidance document for DEQ personnel. Consultants and persons in the regulated community also may find this manual a useful resource and is available on DEQ's website at the link above.

1.0 Regulatory/Statutory Framework for Storage Tank Cleanups

During the release response and corrective action process, tank owners, operators, and other responsible persons may have to meet the requirements of multiple statutes and regulations. DEQ staff members overseeing release response and corrective action need to be knowledgeable of these requirements. Listed below are short descriptions of some of the statutes and regulations that staff may deal with on a regular basis.

Article 9 of State Water Control Law (Code of Virginia, Section 62.1-44.34:8 & 9) - Article 9 provides DEQ with the authority to: (1) establish technical standards for USTs containing petroleum and regulated substances; (2) require the owner or operator of an UST to take corrective actions for a release of petroleum or regulated substance; and (3) seek recovery of costs incurred for undertaking corrective action or enforcement actions. This statute requires DEQ to promulgate regulations needed to carry out its duties with regard to USTs.

Article 11 of State Water Control Law (Code of Virginia, Section 62.1-44.34:14 through 23) - Article 11 prohibits the discharge of oil into state waters (and upon state lands and into storm drains) and provides DEQ with the authority to require the cleanup of oil discharges from most sources other than USTs covered under Article 9. Under Article 11, operators of certain types of facilities and vessels are required to develop oil discharge contingency plans and demonstrate financial responsibility. Article 11 also requires the State Water Control Board to develop regulations for aboveground storage tanks. Persons discharging oil into state waters are required to report the discharge and contain and clean up that discharge.

9 VAC 25-580-10 et seq. Underground Storage Tanks; Technical Standards and Corrective Action Requirements - The UST technical regulations address technical standards for UST system design, installation, operation, release detection, and closure. The technical regulations also contain requirements for release reporting, investigating suspected releases, and corrective action. The regulations also require owners or operators of USTs to notify DEQ of the presence of these tanks.

9 VAC 25-120-10 et seq. General Virginia Pollutant Discharge Elimination System (VPDES) Permit Regulation for Discharges from Petroleum Contaminated Sites, Ground Water Remediation and Hydrostatic Tests - This general permit regulation governs the discharge of wastewater from sites contaminated by petroleum products and some common chlorinated solvents. A previous iteration of the VPDES General Permit Regulation replaced the CAP General Permit Regulation on February 24, 1998.

9 VAC 20-81-10, et seq. Virginia Solid Waste Management Regulations - The solid waste management regulations establish standards for the handling of solid wastes, the disposal of solid waste, and the siting of solid waste management facilities. Staff may interface with the requirement of these regulations when dealing with the management or disposal of petroleum contaminated soil or debris.

9 VAC 20-60-11, et seq. Virginia Hazardous Waste Management Regulations - The Virginia Hazardous Waste Management Regulations provide for the control of all hazardous wastes generated, treated, stored, disposed, or transported within the Commonwealth. Staff may need to consult these regulations or interface with the hazardous waste inspection staff to evaluate if a particular waste (e.g. petroleum contaminated water, used oil) may be a hazardous waste.

9 VAC 25-91-10, et seq. Facility and Aboveground Storage Tank (AST) Regulation - The Facility and AST Regulation establishes requirements for registration, notification, and closure of individual ASTs and facilities within Virginia. This regulation also contains pollution prevention requirements, oil discharge contingency plan requirements, and groundwater characterization study requirements for ASTs and facilities. This regulation consolidates the following repealed regulations: the Oil Discharge

Contingency Plan regulation (9 VAC 25-90-10, et seq.), the Facility and AST Registration Requirements Regulation (9 VAC 25-130-10, et seq.), and the AST Pollution Prevention Requirements regulation (9 VAC-25-140-10, et seq.). The authority for most investigative activities and/or remediation involving storage tanks is provided by Article 9, (9 VAC 25-580-10, et seq.), and Article 11. Although there are no regulations describing steps to be taken in the assessment and remediation of petroleum releases from ASTs, exempt USTs, or excluded USTs, there is a statutory requirement for these releases to be addressed (Article 11 for ASTs and exempt USTs; Article 9 for excluded USTs). Since corrective action for the assessment and remediation of petroleum releases is similar regardless of source, the manual uses corrective action guidelines which mimic the requirement of the UST Technical Regulation. Regional staff members have the flexibility and authority to evaluate what constitutes reasonable and necessary site-specific corrective action requirements for all regulated substance releases. DEQ Division of Enforcement may enforce reasonable requirements specified by regional staff for Article 9 and 11 releases that have clearly been communicated to the responsible person.

Code of Virginia, § 10.1-1231. Brownfields restoration and land renewal policy and programs. The Commonwealth of Virginia has developed statutes and regulations to encourage the remediation of brownfields properties across the state. Code of Virginia § 10.1-123 states: “It shall be the policy of the Commonwealth to encourage remediation and restoration of brownfields by removing barriers and providing incentives and assistance whenever possible. The Department of Environmental Quality and the Economic Development Partnership and other appropriate agencies shall establish policies and programs to implement these policies, including a Voluntary Remediation Program, the Brownfields Restoration and Redevelopment Fund, and other measures as may be appropriate.”

9 VAC 20-160-10 et seq. The Voluntary Remediation Regulation. The Voluntary Remediation Regulation allow owners, operators, or others with interests in a contaminated property to remediate releases of contaminants. DEQ staff will work together collaboratively with persons having sites contaminated by releases from regulated USTs or discharges of oil that are covered by Article 11 of Virginia Water Control Law and/or commingled plumes to complete cleanup in an expeditious manner. Staff will encourage remediation by removing barriers and providing assistance which may include assisting with remedial actions to reach case closure and/or facilitating enrollment into the Voluntary Remediation Program to complete cleanup.

2.0 Definitions

Throughout this manual, many of the following terms will be used repeatedly. The definitions for these terms are provided to allow a greater consistency in their use and interpretation. Please note that two of the definitions regarding tank type were retired and a new tank type was introduced when the UST Technical Regulation was updated on January 1, 2018. Storage Tank Program decisions made pre-2018 were based upon the definitions in Article 9 and the UST Technical Regulation at that time. Storage Tank Program staff who encounter “historic” releases that occurred prior to 2018 may need to consider the Article 9 and UST Technical Regulation definitions that were in place when the release occurred.

Aboveground Storage Tank (AST) - Any one or any combination of tanks, including pipes, used to

contain an accumulation of oil at atmospheric pressure, and the volume of which, including the volume of the pipes, is more than 90% above the surface of the ground.

Deferred USTs [valid for tanks and releases reported PRE-January 1, 2018] - USTs which are subject to Part VI (Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances), but are deferred from Part II (UST Systems: Design, Construction, Installation, and Notification), Part III (General Operating Requirements), Part IV (Release Detection), Part V (Release Reporting, Investigation, and Confirmation), and Part VII (Out of Service UST Systems and Closure) of 9 VAC 25-580-10 et seq.:

1. Wastewater treatment tank systems (these tanks are not part of a treatment system having or needing a VPDES Permit nor are the contents of these systems discharged to a Publicly Owned Treatment Facility that has a VPDES Permit);
2. UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 USC 2011 et seq.);
3. USTs that are part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR 50, Appendix A;
4. Airport hydrant fuel distribution systems [re-designated as a Partially-Excluded tank after January 1, 2018]; and
5. UST systems with field constructed tanks [re-designated as a Partially-excluded tank after January 1, 2018).

These USTs were deferred from certain parts of the UST Technical Regulation until January 1, 2018. On that date, these tanks became “partially excluded” USTs that became subject to certain parts of the regulation. See “partially excluded” USTs below.

Excluded USTs - The types of USTs which meet the definition of UST under Article 9, but are excluded from the requirements of 9 VAC 25-580-10 et seq.

1. Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act (42 USC § 6901) or a mixture of such hazardous waste and other regulated substances;
2. Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under §402 and §307 (b) of the Clean Water Act;
3. Equipment or machinery that contains a regulated substance for operational purposes such as hydraulic lift tanks and electrical equipment tanks;
4. UST systems with a capacity of 110 gallons or less;
5. UST systems that contain a de minimis concentration of regulated substance; and
6. Emergency spill or overflow containment USTs that are expeditiously emptied after use.

Exempt USTs - The types of USTs which are exempt from Article 9 of State Water Control Law and the requirements of 9 VAC 25-580-10 et seq.

1. Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. Tank used for storing heating oil for consumption on the premises where stored;
3. Septic tank;
4. Pipeline facility (including gathering lines):
 - a. Regulated under the Natural Gas Pipeline Safety Act of 1968 (49 USC § 1671 et seq.);
 - b. Regulated under the Hazardous Liquid Pipeline Safety Act of 1979 (49 USC § 2001 et seq.);
or
 - c. Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in subdivision 4a or 4b above.
5. Surface impoundment, pit, pond, and lagoon;
6. Stormwater or wastewater collection system;
7. Flow-through process tank;
8. Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; and
9. Storage tank situated in an underground area (such as a basement, cellar, mineworking drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

Facility - Any development or installation within the Commonwealth that deals in, stores, or handles oil.

Farm Tank – is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. “Farm” includes fish hatcheries, rangeland and nurseries with growing operations.

Free Product – refers to a regulated substance that is present as a nonaqueous phase liquid (e.g. a liquid not dissolved in water).

Hazardous Substance UST System – means an underground storage tank system that contains a hazardous substance defined in § 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC § 9601 et seq.) (but not including any substance regulated as a hazardous waste under subtitle C of the RCRA) or any mixture of such substances and petroleum, which is not a petroleum UST system.

Heating Oil - means petroleum that is No. 1, No. 2, No. 4--light, No. 4--heavy, No. 5--light, No. 5--heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

Heating Oil AST - An AST with a storage capacity of 5,000 gallons or less which contains heating oil that is used to heat the premises where the tank is located.

Motor Fuel - means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine. This definition applies to blended petroleum motor fuels as biodiesel and ethanol blends that

contain more than a de minimis amount of petroleum or petroleum-based substance.

Noncommercial purposes – with respect to motor fuel, means not for resale.

Oil - Means oil of any kind and in any form including, but not limited to, petroleum and petroleum by-products, fuel oil, lubricating oils, sludge, oil refuse, oil mixed with other wastes, crude oils and all other liquid hydrocarbons regardless of specific gravity.

Partially Deferred USTs [valid for tanks and releases reported PRE-January 1, 2018] - UST systems that stored fuel for emergency power generator use. These USTs are deferred from Part IV of 9 VAC 25-580-10 prior to the new UST regulation adopted January 1, 2018. After January 1, 2018 these tanks became subject to all parts of the UST Technical Regulation (see definition for Regulated UST).

Partially Excluded USTs [valid for releases reported AFTER January 1, 2018]– Parts II, III, IV, V, and VII of the UST Technical Regulation do not apply to any of the following types of UST systems:

1. Wastewater treatment tanks not part of a treatment system having or needing a VPDES Permit nor are the contents of these treatment systems discharged to a Publicly Owned Treatment Facility that has a VPDES Permit);
 2. Aboveground storage tanks associated with:
 - a. Airport hydrant fuel distribution systems regulated under Part X of the Underground Storage Tank Technical Regulation; and
 - b. UST systems with field-constructed tanks regulated under Part X of the Underground Storage Tank Technical Regulation.
 3. Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 USC § 2011 et seq.); and
 4. Any UST system that is part of an emergency generator system at nuclear power generation facilities licensed by the Nuclear Regulatory Commission and subject to Nuclear Regulatory Commission requirements regarding design and quality criteria, including 10 CFR part 50.
- These tanks were excluded from all parts of the UST Technical Regulation until January 1, 2018.

Regulated Substance - any element, compound, mixture, solution, or substance that, when released into the environment, may present substantial danger to the public health or welfare, or the environment (see Appendix A for a list of regulated substances). The term "regulated substance" includes:

1. Any substance defined in Section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980 (42 USC § 9601 et seq.), but not any substance regulated as a hazardous waste under subtitle C of the Resource Conservation and Recovery Act (RCRA) of 1976 (42 USC § 6901 et seq.); and
2. Petroleum, including crude oil or any fraction thereof, that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute). The term "regulated substance" includes petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Regulated UST - A UST regulated by and subject to all of the requirements of 9 VAC 25-580-10 (Underground Storage Tanks; Technical Standards and Corrective Action Requirements).

Release - Any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an AST or UST into ground water, surface water, or upon lands, subsurface soils, or storm drain systems.

Tank - a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g. concrete, steel, plastic) that provide structural support.

Underground Storage Tank (UST) - any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of the underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any of the exempt USTs as defined above.

3.0 DEQ Regions

DEQ staff periodically receive calls from responsible persons or consultants requesting phone numbers or addresses of other DEQ Regional Offices. A map of DEQ regions is contained in Appendix B. This map indicates the address and phone number for each of the Regional Offices.

Persons submitting documents to DEQ need to be aware that the agency files most documents in an electronic system and thus requests that documents be submitted in an electronic format. Staff should encourage persons to minimize the electronic size of documents submitted to DEQ. DEQ has mostly phased out the use of fax machines and discourages their use to submit documents. Several DEQ regional offices have general email boxes for the Storage Tank Program and persons submitting electronic files to DEQ are encouraged to utilize these email addresses listed in Appendix B. Tank owners/operators and their consultants are encouraged to contact the regional case manager to receive instruction regarding electronic files.

Appendix A

Regulated Substance List (Title III List of Lists)

The Title III List of Lists is an EPA file created in Adobe Acrobat. The List of Lists is included with the technical manual as a separate file in PDF format and may be obtained at EPA's website below.

http://www2.epa.gov/sites/production/files/2015-03/documents/list_of_lists.pdf

Appendix B

DEQ Regions

DEQ REGIONAL OFFICES

Blue Ridge Regional Office (BRRO)
 901 Russell Drive
 Salem, VA. 24153
 (540) 562-6700

Northern Regional Office (NRO)
 13901 Crown Court
 Woodbridge, VA. 22193
 (703) 583-3800
NRORemediation@deq.virginia.gov

Piedmont Regional Office (PRO)
 4949-A Cox Road
 Glen Allen, VA. 23060
 (804) 527-5020
PRO.Tanks@deq.virginia.gov

Tidewater Regional Office (TRO)
 5636 Southern Boulevard
 Virginia Beach, VA. 23462
 (757) 518-2000
TRO.Tanks@deq.virginia.gov

Southwest Regional Office (SWRO)
 355-A Deadmore Street
 Abingdon, VA. 24210
 (276) 676-4800

Valley Regional Office (VRO)
 4411 Early Road
 P.O. Box 3000
 Harrisonburg, VA. 22801
 (540) 574-7800
VRO.Tanks@deq.virginia.gov

Regional Offices	Counties and Cities	
Northern Regional Office	Counties	Arlington, Caroline, Culpeper, Fairfax, Fauquier, King George, Loudoun, Madison, Orange, Prince William, Rappahannock, Spotsylvania, Stafford, Louisa
	Cities	Alexandria, Falls Church, Fairfax, Fredericksburg, Manassas, Manassas Park
Piedmont Regional Office	Counties	Amelia, Brunswick, Buckingham, Charles City, Chesterfield, Cumberland, Dinwiddie, Essex, Gloucester, Goochland, Greenville, Hanover, Henrico, King and Queen, King William, Lancaster, Lunenburg, Mathews, Mecklenburg, Middlesex, New Kent, Northumberland, Nottoway, Powhatan, Prince Edward, Prince George, Richmond, Surry, Sussex, Westmoreland
	Cities	Colonial Heights, Emporia, Hopewell, Petersburg, Richmond.
Blue Ridge Regional Office	Counties	Amherst, Appomattox, Campbell, Charlotte, Halifax, Mecklenburg, Prince Edward, Pittsylvania, Alleghany, Bedford, Botetourt, Craig, Floyd, Franklin, Giles, Henry, Montgomery, Patrick, Pulaski, Roanoke
	Cities	Danville, Lynchburg, Bedford, Clifton Forge, Covington, Martinsville, Radford, Roanoke, Salem
Valley Regional Office	Counties	Albemarle, Augusta, Bath, Clarke, Fluvanna, Frederick, Greene, Highland, Nelson, Page, Rockbridge, Rockingham, Shenandoah, Warren
	Cities	Buena Vista, Charlottesville, Harrisonburg, Lexington, Staunton, Waynesboro, Winchester
Southwest Regional Office	Counties	Bland, Buchanan, Carroll, Dickenson, Grayson, Lee, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe
	Cities	Bristol, Galax, Norton
Tidewater Regional Office	Counties	Accomack, Isle of Wight, James City, Northampton, Southampton, York
	Cities	Chesapeake, Franklin, Hampton, Newport News, Norfolk, Portsmouth, Poquoson, Suffolk, Virginia Beach, Williamsburg